

*flora*, *Satyrus meadii* and *Chionobas chryxus*, all of them living from five hundred to a thousand or two miles from Mr. Edwards's home, where they were bred and studied. This shows at once the opportunities to be overtaken by any zealous student, and renders possible thorough acquaintance with our entire fauna. Mr. Edwards hints here and there at some of the difficulties of the work, to have overcome which, even partially, in the case of such distant and secluded insects as this *Satyrus* and this *Chionobas*, is a high merit indeed! *Apatura flora* is an inhabitant of our extreme southern border; *Satyrus meadii* lives at moderate altitudes in restricted localities in Colorado, New Mexico, Arizona and Montana; and *Chionobas chryxus* at higher elevations in the Rocky Mts. from Colorado to British America and, if with Mr. Edwards we include calais in the species' also across the continent in the higher north. In all three species the caterpillars hibernate in early life, but the history of the species as given here presents nothing of unusual interest and closely resembles that of their nearest allies. Eighty-one figures, most of them colored and many much magnified, are given on the three plates.

FIFTH REPORT OF THE U. S. ENTOMOLOGICAL COMMISSION.—Dr. Packard's treatise on forest insects, only just issued though completed over three year's ago, closes the work of the U. S. entomological commission. It is based on a former "bulletin" of the commission, but is vastly enlarged and abounds in illustrations many of which, unfortunately, conform to the standard of those published years ago by the agricultural department, but are much inferior to those now published by its division of entomology. One can quickly see by a glance through the volume of more than 900 pages, 40 plates and 300 cuts in the text that it is a veritable store house of facts and observations, and is worked out in the same way as the previous bulletin. It has the faults of many government publications that the material is too

little sifted and digested, but there can be no doubt of its great service. A systematic index of the insects is sadly needed; the very plan of the book particularly requires it.

PERSONAL NOTES.—Mr. William Beutenmüller has recently been appointed curator of the department of entomology in the American museum of natural history in Central Park, New York City.

Mr. C. H. Tyler Townsend has just taken the post of entomologist at the agricultural experiment station at Las Cruces, New Mexico.

#### PROCEEDINGS OF SOCIETIES.

##### CAMBRIDGE ENTOMOLOGICAL CLUB.

8 February, 1889.—The 143d meeting was held at 156 Brattle St., the president in the chair.

Mr. G. Dimmock read part of a letter from Mrs. C. M. Winston describing the resemblance of some "walking-sticks" to the plants on which they lived.

Mr. Dimmock showed a collection of Cynipidae with their galls given to the Club by Mr. C. P. Gillette of Iowa; it was voted to give the collection to the Boston society of natural history.

Mr. J. H. Emerton showed specimens of *Hypochilus*, a spider recently described by Geo. Marx which has the cribellum and calamistrum like *Filisata* and also four respiratory sacs like the *Theraphosidae*. These specimens were collected by Miss Mary T. Palmer at Manitou, Col.

Mr. Emerton also made some remarks on the spiders collected by the Messrs. Smith of Brooklyn, N. Y. in the province of Matto Grosso in Brazil.

Mr. S. H. Scudder explained the history of a newspaper account of a pretended great flight of butterflies at Westerly, R. I.

Mr. H. Hinkley showed some artificial insects made by Japanese and made some remarks on the breeding habits of *Lepidoptera*.



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